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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,701	03/19/2001	Rolf Holger Wolters	2002-3	6288

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EXAMINER	
YE, LIN	

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/905,701	WOLTERS, ROLF HOLGER	
	Examiner	Art Unit	
	Lin Ye	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wober et al. 5,475,769 in view of Terashita U.S. Patent 4,905,039.

Referring to claim 1, the Wober reference discloses in Figures 1-5, a device comprising: plurality of binned pixels (neighborhoods 40, 42 and 44, see Col. 3, lines 24-40), each of said binned pixels comprising an array of single pixels (3x3 matrix pixels as shown in Figure 1); a plurality of mosaics of filters, each mosaic of filters (mosaic filters 34, 36 and 38) masking at least a portion of a corresponding binned pixel, and each of said filters in each of said mosaics masking a single pixel as shown in Figure 2; wherein each of said filters transmits light of at least one selected frequency band to a corresponding single pixel (each mosaic filter can selects a predetermined bandwidth, as known the Red filter can select wavelength of about 650nm, Green filter can select wavelength of about 510nm, and Blue filter can select wavelength of about 475); whereby said binned pixels (neighborhoods) provide spatial resolution in an image; and whereby said mosaics of filters and said binned pixels provide spectral resolution in an image (see Col. 7, lines 41-65 and Col. 8, lines 1-23). However, the

Wober reference does not explicitly states wherein at least one of such filters in each of said mosaics has a spectral resolution of approximately at most 20 nanometers centered around at least one desired transmission wavelength; wherein said desired transmission wavelengths are selected to coincide with peaks in spectral signatures whose maxima correlate to those of specific compounds.

The Terashita reference teaches wherein at least one of such filters (B-filter, G-filter and R-filter) in each of said mosaics has a spectral resolution of approximately at most 20 nanometers (+- 10nm) centered around at least one desired transmission wavelength (See Col. 9, lines 37-52 and Col. 12, lines 31-51); wherein said desired transmission wavelengths are selected to coincide with peaks in spectral signatures whose maxima correlate to those of specific compounds (See Col. 13, lines 26-60). The Terashita reference is evidence that one of ordinary skill in the art at the time to see more advantages for at least one of such filters in each of said mosaics has a spectral resolution of approximately at most 20 nanometers centered around at least one desired transmission wavelength; wherein said desired transmission wavelengths are selected to coincide with peaks in spectral signatures whose maxima correlate to those of specific compounds so that first peak sensitivity of transmission wavelength and the second peak sensitivity of the transmission wavelength are not reduced so that they can be separated without failure (See Col. 13, lines 14-26). For that reason, it would have been obvious to the one of ordinary skill in the art at the time to modify the device of Wober for providing band pass mosaics filter has a spectral resolution of approximately at most 20 nanometers centered around at least one desired transmission wavelength; wherein said desired transmission wavelengths are selected to coincide with

peaks in spectral signatures whose maxima correlate to those of specific compounds as taught by Terashita.

Referring to claim 2, the Wober and Terashita references disclose all subject matter as discussed in respected to claim 1, the Terashita reference discloses wherein said filters constitute uniformly spaced, equally sized nanometer spheres, wherein adjacent nanometer spheres are spaced apart from each other by a uniform distance of approximately half of said desired transmission wavelength (See Col. 9, lines 37-52).

Referring to claim 4, the Wober and Terashita references disclose all subject matter as discussed in respected to claim 1, the Wober reference discloses wherein each of said binned pixels (neighborhood pixels) consist of an array of 3x3 single pixels as shown in Figure 1.

Referring to claim 11, the Wober and Terashita references disclose all subject matter as discussed in respected same comments to claim 1.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wober et al. 5,475,769 in view of Terashita U.S. Patent 4,905,039 and Takada U.S. Patent 6,545,714.

Referring to claim 3, the Wober and Terashita references disclose all subject matter as discussed in respected to claim 1, except that the Wober reference does not explicitly states wherein said single pixels are approximately 5 micrometers.

The Takada reference teaches to provide an image pickup device comprise a plurality pixels (2.5 millions), the single pixels are approximately 5 micrometers (a pixel pitch approximately 5 micrometers, see Abstract and Col. 7, lines 60-67). The Takada reference is evidence that one of ordinary skill in the art at the time to see more advantages for providing

each of the pixels in the image pickup device are approximately 5 micrometers so that the image pickup device can be very compact and low-cost and capable of photographing a high-quality image. For that reason, it would have been obvious to the one of ordinary skill in the art at the time to modify the device of Wober for providing the single pixels are approximately 5 micrometers as taught by Takada.

4. Claims 5-9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wober et al. 5,475,769 in view of Terashita U.S. Patent 4,905,039 and West Patent 3,787,695.

Referring to claims 5-9 and 10, the Wober and Terashita references disclose all subject matter as discussed in respected to claim 1, except that the Wober reference does not explicitly states wherein one of the mosaics of filters can select at least one of frequency band, such as transmitting 390 nm, 410nm, 545nm, 580nm, 635nm.

The West reference teaches in Figure 6, the filter (33) provides for wavelength selectivity. The filter is used have a variation of transmitted wavelength from about 390 nm to 700 nm (the filter can select at least one of frequency band, such as transmitting 390 nm, 410nm, 545nm, 580nm, 635nm implicitly). The West reference is evidence that one of ordinary skill in the art at the time to see more advantages the image pickup device has more flexible design options which one of the mosaics of filters can select at least one of frequency band, such as transmitting 390 nm, 410nm, 545nm, 580nm, 635nm so that enabling analysis of the intensity of emitted radiation at different wavelengths easily and the good spectral resolution can be achieved (See Col. 6, lines 13-25). For that reason, it would have been obvious to the one of ordinary skill in the art at the time to modify the device of Wober for

providing one of the mosaics of filters can select at least one of frequency band, such as transmitting 390 nm, 410nm, 545nm, 580nm, 635nm as taught by West.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lin Ye
Primary Examiner
Art Unit 2622

May 18, 2006